REMARKS

In accordance with the foregoing, new claims 17-36 are presented. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-16 are cancelled herein without prejudice or disclaimer. Claims 17-36 are pending and under consideration.

Item 2: Objection To Specification-Title

In item 2 of the Office Action, the Examiner objects to the title as not being descriptive. (Action at page 2). A new title is submitted herein to address the Examiner's concerns. Withdrawal of the objection is requested.

New Claims

New claims 17-36 are presented to recite features of the invention in a different manner. Independent claim 17 recites a central processing unit including "an input unit that inputs a command that can be executed by using a firmware or a logic circuit; a storing unit that stores a plurality of operation modes, each one of the operation modes corresponding to a different set of commands that are available when the each one of the operation modes is set; a determining unit that determines whether the input command is included or not in the set of commands corresponding to a current operation mode; and a execution unit that executes the input command by using the firmware or the logic circuit, when the input command is included in the set of commands corresponding to the current operation mode." New independent claims 27 and 28 have similar recitations.

Dependent claims 18-26 recite further features of the central processing unit and dependent claims 29-36 recite have similar recitations as claims 18-25. Support for the new claims is provided, for example in Figs. 2-4 , paragraphs [0072] - [0086] of the specification, and embodiments of the present invention as illustrated in other figures and described in paragraphs [0012]- [0071] and [0087]- [0367] of the specification. No new matter is being presented, and approval and entry are respectfully requested.

These, and other, features of claims patentably distinguish over the art currently relied on by the Examiner., and they are submitted to be allowable for the recitations therein.

Item 4: Examiner's Concerns Regarding Claims As Complying With 35 U.S.C. 112, second paragraph

In item 4, of the Office Action, the Examiner rejected claims 5 and 14 (both cancelled herein) under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner

asserted that the phrase "if number of the at least useable commands...". was unclear. (Action at page 2).

Applicants submit that none of new claims 17-36 use the phrase if number of the at least useable commands and new claims 17-36 comply with 35 U.S.C. §112, second paragraph

Items 6-7 Examiner's Concerns Regarding Claims As Complying With 35 U.S.C. 101

In items 6-7 of the Office Action, the Examiner rejected claims 10-16 (all cancelled herein) under 35 U.S.C. §§101 asserting they were directed to non-statutory subject matter. (Action at page 3).

New claims 17-26 are directed to a "central processing unit, claim 27 is directed to a method for managing a plurality of operating modes and claims 28-36 are directed to a "computer-readable recording medium that stores a computer program for managing a plurality of operating modes." Applicants submit that claims 17-36 comply with 35 U.S.C. §101.

Items 8-24: Examiner's Assertions Regarding Claims As Being Anticipated under 35 U.S.C. §102(b) or obvious under 35 U.S.C. §103(a)

In items 9- 18 of the Office Action, the Examiner rejected claims 1, 4 – 7, 10, and 13 – 16 (all cancelled herein) under 35 U.S.C. §102(b) as being anticipated by Keller et al (U.S.P. 5,752,032). (Action at pages 4-5). In items 20-23 of the Office Action, the Examiner rejected claims 2, 3, 11 and 12 (all cancelled herein) under 35 U.S.C. §103 (a) as being obvious over Keller in view of Nevis et al (U.S.P. 6,581,159) and in item 24 of the Office Action rejected claims 8 and 9 under 35 U.S.C. §103 (a) under 35 U.S.C. §103(a) as being unpatentable over Keller in view of Biondi (U.S.P. 6,622,246) and further in view of Gregory (U.S.P. 5,748,488).

Applicants submit that features recited by each of the independent claims patentably distinguish over the art currently relied on by the Examiner, alone or in *arguendo* combination.

Independent claim 17 recites a central processing unit including:

a) "an input unit that inputs a command that can be executed by using a firmware or a logic circuit;" and

b) " storing unit that stores a plurality of operation modes, each one of the operation modes corresponding to a different set of commands that are available when the each one of the operation modes is set (emphasis added); and

c)"a determining unit that determines whether the input command is included or not in

the set of commands corresponding to a current operation mode;" and

d) "a execution unit that executes the input command by using the firmware or the logic circuit, when the input command is included in the set of commands corresponding to the current operation mode (emphasis added)." New independent claims 27 and 28 have similar recitations.

That is, according to an aspect of the present invention, since the execution unit executes "when the input command is included in the set of commands corresponding to the current operation mode," the operation mode restricts commands that can be executed. thus, for example, a system of security is improved. Further, by adding new operation modes dynamically, the security system and be extended.

Kellar, the primary art currently relied on by the Examiner, does not teach determining "whether the input command is included or not in the set of commands corresponding to a current operation mode," as recited by claim 17 for example.

Accordingly, without such a determination, Kellar does not teach a restriction on a execution, based on the determining , "when the input command is included in the set of commands corresponding to the current operation mode," as recited by claim 17, for example.

By contrast, Kellar merely discusses:

> shell module 72 is the initial component of the device driver 50 loaded into the memory 16 as part of the initialization of the operating system kernel 56 during system startup. In a conventional operating system such as Microsoft MS-Windows '95.TM., the operating system kernel 56 will load the shell module 72 into memory 16 as a consequence of a reference in a standard initialization configuration file or data base, such as the MS-Windows '95 registry services. An initialization entry point provided by the shell module 72 permits the operating system kernel 56 to initiate the device driver specific initialization of the device driver 50. As part of this initialization, the shell module 72 determines a Board driver, set of hardware interface modules, and compliment of operating system interface modules that are required to complete the implementation device driver 50 to support the O/S API that will be presented by the device driver 50 to the operating system layer 54. In a preferred embodiment, these determined additional modules, if not statically linked to the shell module 72, are dynamically loaded and then logically linked into the device driver 50.

(col. 7, line 61- col. 8, line 24).

That is, Keller merely teaches loading a shell module into memory, selecting a board driver that corresponds with the shell module, adding a new shell module and connecting a board driver to the new module, and loading hardware interface modules that correspond to the

board driver that are part of a peripheral.

Applicants submit that Nevis does not teach determining "whether the input command is included or not in the set of commands corresponding to a current operation mode," and does not teach executing, based on the determining, "when the input command is included in the set of commands corresponding to the current operation mode," as recited by claim 17, for example.

By contrast, Nevis merely teaches

> firmware subprogram 125 applies a one-way hash process to the external BIOS module to obtain a computed hash value. The computed hash value is compared with the hash value stored in the portion of the firmware that is free of intruder tampering and that was previously computed and stored when the resident firmware was created. If the hash values compare as equal, the module provided has been proven to be the same as that which existed at the time the firmware was created, illustrated by block 130. Instead of "unlocking" the hardware, as in the previously described approaches, and returning processor control to the caller, the external BIOS module is invoked as a protected privileged firmware subprogram.

(col. , lines 11-35).

That is, Nevis merely teaches a technique for updating BIOS while preventing a tampering by an intruder and using digital signature techniques to validate the firmware.

An *arguendo* combination of Keller and Nevis merely teaches loading a shell module into memory, selecting a board driver that corresponds with the shell module, adding a new shell module and connecting a board driver to the new module, and loading hardware interface modules that correspond to the board driver that are part of a peripheral and updating BIOS while preventing a tampering by an intruder and using digital signature techniques to validate the firmware

Applicants submit that Biondi also does not teach determining "whether the input command is included or not in the set of commands corresponding to a current operation mode," and does not teach executing, based on the determining, "when the input command is included in the set of commands corresponding to the current operation mode," as recited by claim 17, for example.

By contrast, Biondi merely teaches

> During power-up, the controller 510 starts operation using instructions in the boot code space 542. During this time, the controller 510 will initialize various hardware, then determine which of the two firmware spaces 544 or 546 contains valid firmware. Upon identifying the proper firmware space 544 or 546, the controller 510, upon direction from instructions stored in the boot code space 542, will execute instructions stored in the identified firmware space 544 or 546. Before storing the new firmware, the controller 510 must

> determine which of the two firmware spaces 545 or 546 contains valid firmware. When the firmware spaces 544 or 546 no longer store valid or current firmware, that firmware will typically be erased, marked as invalid or the firmware will not comply with the checksum.

(Col. 4, lines 7-20).

That is, Biondi merely teaches a selecting a storing area to be erased by comparing storing areas for multiple firmware on the occasion of acquiring a new firmware from outside, and storing the new firmware into the storing area selected and using a logic circuit instead of firmware.

An *arguendo* combination of Keller and Biondi merely teaches loading a shell module into memory, selecting a board driver that corresponds with the shell module, adding a new shell module and connecting a board driver to the new module, and loading hardware interface modules that correspond to the board driver that are part of a peripheral and selecting a storing area to be erased by comparing storing areas for multiple firmware on the occasion of acquiring a new firmware from outside, and storing the new firmware into the storing area selected and using a logic circuit instead of firmware.

Applicants submit that Gregory also does not teach determining "whether the input command is included or not in the set of commands corresponding to a current operation mode," and does not teach executing, based on the determining, "when the input command is included in the set of commands corresponding to the current operation mode," as recited by claim 17, for example.

By contrast, Gregory merely teaches a "hardware generator creates the logic elements necessary to generate the signal represented by each assignment condition." (col. 4, lines 55-65). That is, Gregory merely teaches generating a logic circuit based only on information on the signals.

An *arguendo* combination of Keller and Gregory merely teaches loading a shell module into memory, selecting a board driver that corresponds with the shell module, adding a new shell module and connecting a board driver to the new module, and loading hardware interface modules that correspond to the board driver that are part of a peripheral and: generating a logic circuit based only on information on the signals.

Summary

Since features recited by each of independent claims 17, 27, and 28 (and respective dependent claims 18-26 and 29-36), are not taught by the art current relied on by the Examiner

alone or in *arguendo* combination, claims 17-36 should be allowed.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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